

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number  
**WO 2005/084646 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 9/19**,  
47/00, 47/10, 47/36, 47/42, 39/00, 38/00

(21) International Application Number:  
PCT/GB2005/000742

(22) International Filing Date: 28 February 2005 (28.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0404586.0 1 March 2004 (01.03.2004) GB

(71) Applicant (for all designated States except US): BRI-  
TANNIA PHARMACEUTICALS LIMITED [GB/GB];  
41-51 Brighton Road, Redhill, Surrey RH1 6YS (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ADAMS, Gerald  
[GB/GB]; 17 Pauls Dene Cersent, Salisbury, Wiltshire SP1  
3QU (GB). LAMBERT, Peter, Alan [GB/GB]; c/o Britan-  
nia Pharmaceuticals Limited, 41-51 Brighton Road, Red-  
hill, Surrey RH1 6Y (GB).

(74) Agent: PEEL, James, Peter; Barker Brettell, 10-12  
Priests Bridge, London SW15 5JE (GB).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

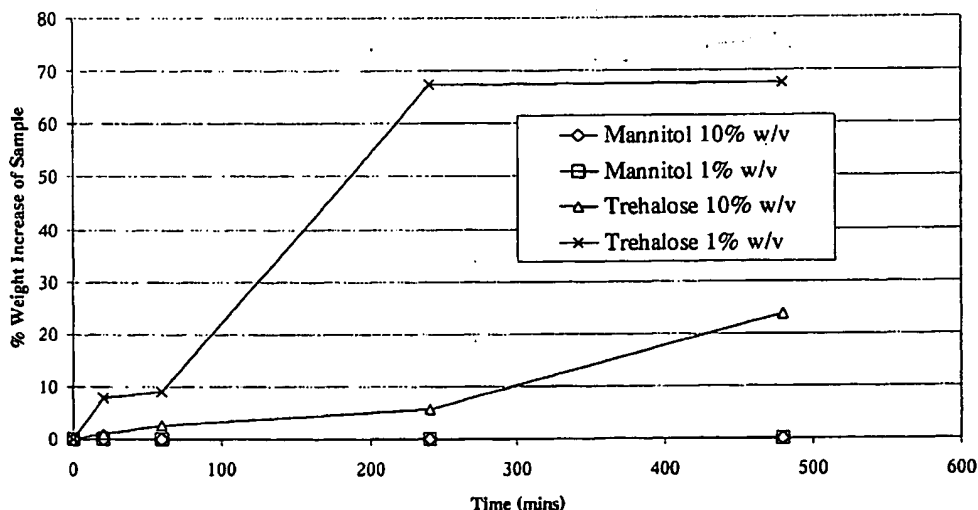
Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: POWDERED COMPOSITIONS OF SENSITIVE ACTIVE MATERIALS IN AN AT LEAST PARTIALLY AMOR-  
PHOUS STATE

% Increase in Weight For Freeze Dried Samples of Mannitol (Crystalline) and Trehalose  
(Amorphous) Exposed to 75% RH Environment



(57) Abstract: The invention provides a powdered formulation which is a freeze-dried mixture of a sensitive active material and an excipient containing: 0.1 - 50 % by wt of the sensitive active material, 50 - 99.99 % by wt of the excipient, wherein at least 0.1 % by wt of the mixture is an amorphous state; the formulation has a substantially reduced hygroscopicity.